

MISCELLANEOUS NOTES

1. PARTURITION IN FERAL RHESUS MACAQUE (*MACACA MULATTA*): A CASE REPORT

Jaipur City has *Macaca mulatta* and common *Presbytis entellus* since time immemorial (Mathur and Manohar 1989). Their density is high in the old city of Jaipur (Mathur and Manohar 1990a). The groups at Ambagarh Reserve Forest (ARF) have been under observation since October 1985. ARF has 7 langur and 5 rhesus groups (Mathur and Manohar 1990b). In 7 years of study only on one occasion, a rhesus female was seen giving birth. On 29.5.87 at 10.30 a.m. at ARF I was taking notes on *Tamarindus* group of rhesus, which had 64 animals (8 adult males, 26 adult females, 4 subadult males and 3 subadult females, 7 juveniles and 16 infants). An adult female drew my attention, as she was making circling movements and sitting intermittently. She appeared restless. She inspected her genitalia frequently with her hands, sniffed the hands and genitalia alternately. In between she also looked at her hind quarters. The entire sequence of parturition was witnessed and recorded minute by minute.

10.30 The female was noticed making peculiar movements. None of the other group members noticed her though they were foraging closely.

10.32 She appeared restless, no specific vocalization or gesture.

10.33 She squatted many times while still continuing with circling movements.

10.35 While she squatted, contractions in her abdominal region were very conspicuous. She kept her palms on her knees.

10.39 She touched her genitalia and looked at them; mucus was discharged, licked her fingers, a swelling appeared in vaginal area.

10.40 Female explored its genitalia, blood came out. She sat, stood again, blood kept coming out. Something was seen protruding, probably the head of infant.

10.41 Circled, bent and licked the blood, sat on her rump, separated hind legs, bent down and looked at the protruding infant's head. There were no apparent signs of pain. The female was neither

vocalizing nor had any special facial expressions. The infant was coming out smoothly, female did not use her fore/hind limb to pull the infant out.

10.42 The infant was out. The placenta came out simultaneously. Female held the infant and inspected; she sniffed and licked blood.

10.43 Mother chewed the umbilical cord to separate it from the placenta, licked the blood from infant's fur but did not pick up the infant.

10.44 Female started eating amniotic sac and placenta.

10.45 Another adult female with infant approached and sat about a meter away.

10.46 Baby was on ground close to the mother, it was making faint noises while also moving its limbs; mother was busy eating placenta, almost ignoring the infant.

10.49 Placenta was consumed completely; the other female who was watching, left.

10.50 Umbilical cord consumed completely.

10.51 A juvenile approached and looked at the female. Mother continued cleaning infant by licking. Mother picked up the infant and licked the blood off its body.

11:01 Vocalization by infant increased both in frequency and in pitch.

11:03 Female with the new born moved towards a group of females and sat among them.

11:05 The other females looked at the new born, the juveniles came close and sniffed.

11:06 Mother kept sitting at one place with the group and licked the infant intermittently.

The actual delivery of the baby was very short and quick. The entire act took 30 minutes. The infant's head was first seen coming out at 10:40 and in two minutes the entire body was out. The ease with which the female delivered the baby, indicated its multiparity.

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2. INFANT SURVIVAL AND MORTALITY IN FREE-RANGING HANUMAN LANGURS, *PRESBYTIS ENTELLUS* JODHPUR, WESTERN INDIA

Studies of non-human primate life histories are vital because life histories are key elements of population dynamics. Detailed studies of life tables and demographic parameters for free-ranging non-human primates are still comparatively rare (Winkler *et al.* 1984). In this paper, I present life tables for infants born in three troops of Hanuman langurs (*Presbytis entellus*) between December 1982 and September 1985. These troops named B, KI and KII lived in a semi-arid habitat about 8 km west of Jodhpur in Rajasthan State, Western India. Long-term troop history details are also available for these troops (Agoramoorthy *et al.* 1988). The study troops were monitored between December 1982 and September 1985 to record demographic and social

behaviour data (Agoramoorthy and Mohnot 1988). Ad-libitum sampling was used as observational method (Altmann 1974). In total 41 new born infants were observed during my study with a total sex ratio of 0.46 female per male. One still birth in troop B has been excluded from the sample. Life tables for the period from birth to twelve months of life were worked out. Calculations were based on Caughley (1977) by using the mortality rate (qx), that is proportion of animals alive at age x that die before the age $x + 1$. The px , lx , dx were converted from qx . This method was preferred instead of calculating lx directly from the animals still alive at a given age out of total f . The sample fx gives the total number of male and female infants still surviving at the

TABLE 1
SURVIVORSHIP OF MALE AND FEMALE INFANTS BORN IN TROOP B OF
HANUMAN LANGUR (*Presbytis entellus*) OF JODHPUR

Age months	Sample fx		Mortality rate qx		Survival rate px		Survival lx		Mortality dx	
	M	F	M	F	M	F	M	F	M	F
0	10	2	0.100	0	0.900	1.000	1.000	1.000	0.100	0
1	9	2	0.111	0	0.889	1.000	0.900	1.000	0.100	0
2	8	2	0	0.500	1.000	0.500	0.800	1.000	0	0.500
3	8	1	0.125	0	0.875	1.000	0.800	0.500	0.100	0
4	7	1	0	0	1.000	1.000	0.700	0.500	0	0
5	7	1	0	0	1.000	1.000	1.000	0.700	0	0.00
6	7	1	0	0	1.000	1.000	0.700	0.500	0	0
7	7	1	0	0	1.000	1.000	0.700	0.500	0	0
8	7	1	0	0	1.000	1.000	0.700	0.500	0	0
9	7	1	0	0	1.000	1.000	0.700	0.500	0	0
10	7	1	0	0	1.000	1.000	0.700	0.500	0	0
11	7	1	0	0	1.000	1.000	0.700	0.500	0	0
12	7	1	0	0	1.000	1.000	0.700	0.500	0	0

M = Male; F = Female.